

Working Scientifically	Animals including Humans	Plants	Forces and Motion	Light	State of Matter	Everyday Materials and Uses
observing closely using simple equipment	identify and name a variety of common animals that are birds, fish, amphibians, reptiles, mammals and invertebrates	identify and name a variety of common plants, including garden plants, wild plants and trees, and those classified as deciduous and evergreen	describe how things move at different speeds, speed up and slow down, using simple comparisons, comparative vocabulary and superlative vocabulary	identify and name a variety of sources of light that we can see with our eyes, including electric lights, flames and the Sun	compare and group together materials according to whether they are solids, liquids or gases	distinguish between an object and the material from which it is made
performing simple tests	identify and name a variety of common animals that are carnivores, herbivores and omnivores	describe the basic structure of a variety of common plants including roots, stem, leaves and flowers	Forces and Magnets explore and discuss how a push or a pull is exerted by something and acts on something else	explain that darkness is the absence of light	explain that some materials change state when they are heated or cooled, and measure the temperature at which this happens in degrees Celsius (°C)	identify and name a variety of everyday materials, including wood, plastic, glass, metal, water, and rock
identifying and classifying	describe and compare the structure of a variety of common animals (birds, fish, amphibians, reptiles, mammals and invertebrates, and including pets) and describe how they are suited to their environment	describe how seeds and bulbs grow into mature plants	describe how some forces are made by contact (pushing, pulling) while others act at a distance (e.g. gravity and magnets)	compare the variety of sources of light, using simple comparisons, comparative vocabulary and superlative vocabulary	compare and give reasons, based on measurements, for changes to the state of water, using correct scientific vocabulary	describe the simple physical properties of a variety of everyday materials
recording findings using standard units, drawings, diagrams, photographs, simple prepared formats such as tables and charts, tally charts, and displays	identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense	describe how plants need water, light and a suitable temperature to grow and stay healthy	explain how gravity pulls things down, and that on the Earth's surface, we are supported by a contact force with the ground	describe the features of day and night, including changes in light and temperature	compare and give reasons, based on measurements, for changes to the state of water, using correct scientific vocabulary	compare and group together a variety of everyday materials on the basis of their simple physical properties
setting up simple comparative and fair tests, using a range of equipment including dataloggers	explain that animals including humans have offspring which grow into adults	identify and describe the functions of different parts of plants: roots, stem, leaves and flowers	describe the use of magnets in familiar objects	describe the movement of the Sun across the sky during the day	identify the part played by evaporation and condensation in the water cycle	find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching
beginning to make accurate measurements using standard units	explain the basic needs of animals, including humans, for survival (which are water, food and air)	identify the requirements of plants for life and growth (air, light, water, nutrients from soil and space) and how they vary from plant to plant	explain that magnets attract magnetic materials; that magnets work through, e.g. cardboard	explain how shadows are made when a light source is blocked by something that is not transparent	Properties of Everyday Materials and Reversible Change compare and group together everyday materials based on evidence from comparative tests and fair tests, including hardness, solubility, conductivity and insulation (electricity and heat), behaviour with magnets	based on testing, explore differences between materials, including attraction to a magnet, and floating or sinking
recording findings using simple scientific language, drawings, labelled diagrams, bar charts, and tables	describe the importance for humans of exercise and eating the right amounts of different types of food	Habitats identify that living things live in habitats to which they are particularly suited and describe how different habitats provide for the basic needs of different kinds of animals and plants, and how they depend on each other	Forces compare and give reasons, based on testing, for how forces, including gravity, friction, air and water resistance, affect the movement of a variety of objects	investigate the size of shadows	explain that objects are seen because they give out or reflect light into the eye, using results of any comparative tests. Explain the scientific idea that light travels in straight lines from a light source or is reflected from a surface into the eye	compare and group together a variety of everyday materials on the basis of whether they are attracted to a magnet or will sink/float
reporting on findings from investigations, including written explanations of results and conclusions, displays or presentations	describe the ways in which nutrients, water and oxygen are transported within animals, including humans	identify and name a variety of plants and animals they study in a variety of habitats, including microhabitats	explain, through observation, that forces push and pull objects, making them change shape, and that there is always something doing the pushing or pulling either by contact or at a distance	explain that light can be broken into colours and that different colours of light can be combined to appear as a new colour	explain that some substances will dissolve in liquid to form a solution, and how to recover a substance from a solution	Rocks compare and group together different kinds of rocks on the basis of their simple physical properties
using results to draw simple conclusions and suggest improvements and predictions for setting up further tests	identify that humans and some animals have skeletons and muscles for support and movement	describe how animals obtain their food from plants and other animals using the idea of a simple food chain, and identify and name different sources of food	explain that drag forces tend to slow things down, including air resistance and, to a greater extent, resistance in liquids	explain how the ray model of light explains the size of shadows	use knowledge of solids, liquids and gases to decide how mixtures might be separated, including filtering, sieving and evaporating	relate the simple physical properties of some rocks to their formation (igneous or sedimentary)
planning investigations, including, recognising and controlling variables where appropriate	identify and name the basic parts of the digestive system in humans	identify and name a variety of living things that can be grouped as producers, consumers, predator, prey, herbivores, carnivores and omnivores (including examples of plants and animals)	measure the size of a force	use simple optical instruments	give reasons, where appropriate, for the uses of everyday materials based on evidence from comparative tests and fair tests, including metals, wood and plastic	describe in simple terms how fossils are formed when things that have lived are trapped within sedimentary rock
taking measurements using a range of scientific equipment with increasing accuracy and precision	identify the simple functions of the teeth and different types of teeth in humans	explain, using food chains and simple food webs, how feeding relationships occur in the local environment, including a variety of habitats and micro habitats	explain the idea of speed	Sound identify and name a variety of sources of sound that we can hear with our ears, and how the sounds are made	Changes that form New Materials explain that some changes result in the formation of new materials, and that this kind of change is difficult to reverse	Earth and Space explain that the Sun is at the centre of our solar system and that the Sun, Earth and Moon are approximately spherical
recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, bar and line graphs, and models	Classification of Living Things Identify and name a variety of living things (plants and animals) in the local and wider environment, using classification keys to assign them to groups	All Living Things explain the differences between things that are living and things that have never been alive	Static Electricity and Magnetism explain that magnets have two poles, and that magnets can both attract and repel – unlike poles attract and like poles repel	compare the variety of sources of sound, using simple comparisons, comparative vocabulary and superlative vocabulary	explain that sound travels away from sources and get fainter as it does so	explain that the Sun is one of a great many stars in the galaxy called the Milky Way, and the Milky Way is one of a vast number of galaxies in the universe
reporting findings from investigations, including written explanations of results, explanation involving causal relationships, and conclusions	Evolution and Inheritance describe how plants and animals, including humans, resemble their parents in many features	describe the life cycles common to a variety of animals including humans (birth, growth, development, reproduction, death), and to a variety of plants (growth, reproduction and death)	Electricity describe the effects of static electricity and show that they occur when some materials are rubbed together	develop understanding of patterns of pitch and volume, and explore varying sound systematically	demonstrate that dissolving, mixing and change of state are reversible changes	explain that there are other planets around distant stars, and name some constellations, as observed by Earth
presenting reports of findings in written form, displays and presentations	explain how the human skeleton has changed over time, since we separated from other primates, and discuss the advantages and disadvantages of being on two feet rather than four	explain the classification of living things into broad groups according to common observable characteristics and based on similarities and differences, including plants, animals and micro-organisms	construct a simple electric circuit, demonstrating that the circuit must be correctly constructed and complete in order for components to function	explain how sounds are heard using results of any comparative tests, and the scientific idea that sounds are made by vibrations that travel from a source and through materials (solids, liquids and gases) to the ear	explain that the Earth moves around the Sun, taking one year to do so; that the Moon moves around the Earth, taking 28 days to do so; and that the Earth revolves, taking one day	identify the four seasons and the regular changes in sunlight and weather associated with them in the UK
continuing to develop the ability to use test results to make predictions to set up further comparative and fair tests	give reasons why living things produce offspring of the same kind, but in many cases offspring are not identical with each other or with their parents	compare the life process of reproduction amongst plants and animals	explain that short circuits may cause wires to heat up and that fuses are electrical safety devices that are triggered by short circuits	Key:	Year 1 Year 2 Year 3 Year 4 Year 5 Year 6	
	explain that evolution happens over time, fossils provide information about living things that inhabited the Earth many years ago; how animals and plants are suited to and adapt to their environment in different ways; and how this leads to evolution	describe the changes as humans develop from birth to old age	explain the effect of changing the voltage of a battery			

